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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,667	12/13/2001	Tao Hong	VAL 100 P2	7810

34232 7590 07/10/2003

MATTHEW R. JENKINS, ESQ.
2310 FAR HILLS BUILDING
DAYTON, OH 45419

EXAMINER

NGUYEN, HANH N

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 07/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/017,667	HONG ET AL.	
	Examiner	Art Unit	
	Nguyen N Hanh	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Remarks

1. In view of amendments, the examiner withdraws the objection to claim 7. The cancellation of claim 2 has been acknowledged.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-23 and 25 are rejected under 35 U.S.C. 102(a) as being anticipated by Francois (0 418 135 A1).

Regarding claim 1, Francois discloses an electric motor or alternator comprising: a stator (1 in Fig. 1) comprising pairs of magnets or coils for providing an electromagnetic field; a rotor (2) mounted on an armature shaft (3) and rotatably positioned in said stator, said rotor comprising a commutator (4) positioned on an armature shaft; a brush holder plate (7 in Fig. 1 and 2) positioned around said commutator and comprising a plurality of brush boxes (12) each capable of receiving at least one brush (48); and said brush box comprising a heat sink (10) comprising at least one heat sink fin for dissipating heat generated by said brushes to lower a brush temperature, said heat sink fin being oriented substantially parallel to a direction of airflow around said plurality of brush boxes.

Regarding claim 3, Francois also discloses an electric motor or alternator wherein said heat sink comprises a plurality of fins situated on at least one of said plurality of brush boxes (Fig. 4) so that the fins extended above a top surface of said brush boxes.

Regarding claim 4, Francois also discloses an electric motor or alternator wherein said plurality of fins comprises at least three fins (Fig. 2).

Regarding claim 5, Francois also discloses an electric motor or alternator wherein said plurality of brush boxes comprise a plurality of fins (11) integrally formed, separately mounted or otherwise associated with said brush box with a good thermal connection.

Regarding claim 6, Francois also discloses an electric motor or alternator wherein said plurality of brush boxes and said heat sink is copper, aluminum or other materials with high thermal conductivity (heat sink fin is made of metal as described in Col. 1, line 48).

Regarding claim 7, Francois also discloses an electric motor or alternator wherein in said plurality of fins, at least two fins are generally parallel to each other (Fig. 2).

Regarding claim 8, Francois also discloses an electric motor or alternator wherein at least one of said at least two fins are non-planar (not lying in the same plane).

Regarding claim 9, it is noted that all limitations of the claimed invention have been fulfilled by Francois as in claim 1.

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Regarding claim 10, it is noted that the method as claimed has been fulfilled by Francois as in claim 2.

Regarding claim 11, it is noted that all limitations of the claimed invention have been fulfilled by Francois as in claim 3.

Regarding claim 12, it is noted that all limitations of the claimed invention have been fulfilled by Francois as in claim 4.

Regarding claim 13, it is noted that all limitations of the claimed invention have been fulfilled by Francois as in claim 5.

Regarding claim 14, it is noted that all limitations of the claimed invention have been fulfilled by Francois as in claim 6.

Regarding claim 15, it is noted that all limitations of the claimed invention have been fulfilled by Francois as in claim 7.

Regarding claim 16, it is noted that all limitations of the claimed invention have been fulfilled by Francois as in claim 8.

Regarding claim 17, Francois also disclose a brush retainer comprising: a brush holder plate (7) having an aperture therethrough for receiving a commutator (Fig. 1), said brush holder further comprising a plurality of brush boxes (12) each having at least one brush (not shown) therein for contacting said commutator when said commutator is positioned in said aperture; and said brush holder comprising a heat sink (10) comprising at least one heat sink fin, said heat sink fin being oriented substantially parallel to a direction of airflow around said plurality of brush boxes.

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Regarding claim 18, Francois also discloses a brush retainer wherein said heat sink comprises at least one fin (11) situated on said brush box.

Regarding claim 19, it is noted that all limitations of the claimed invention have been fulfilled by Francois as in claim 3.

Regarding claim 20, Francois also discloses a brush retainer wherein said plurality of fins comprises at least two fins (Fig. 2).

Regarding claim 21, it is noted that all limitations of the claimed invention have been fulfilled by Francois as in claim 5.

Regarding claim 22, it is noted that all limitations of the claimed invention have been fulfilled by Francois as in claim 7.

Regarding claim 23, it is noted that all limitations of the claimed invention have been fulfilled by Francois as in claim 6.

Regarding claim 25, it is noted that all limitations of the claimed invention have been fulfilled by Francois as in claim 8.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

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were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Francois.

Regarding claim 24, Francois shows all limitations of the claimed invention except showing the brush retainer wherein said brushes comprise a brush temperature without said heat sink and a second brush temperature with said heat sink, said second brush temperature being at least 9.7 degrees Celsius lower than said brush temperature. In the instant case, It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the brush retainer with the heat sink to lower the temperature of the brush least 9.7 degrees Celsius than brush temperature without said heat sink to prevent overheating, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Response to Arguments

4. Applicant's arguments with respect to claims 1-25 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

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5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Information on How to Contact USPTO

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh N Nguyen whose telephone number is (703)305-3466. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703)308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3431 for regular communications and (703)305-3431 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-1782.

HNN

July 2, 2003

A handwritten signature in black ink, appearing to read 'Karl Tamai', with a stylized flourish at the end.

KARL TAMAI
PRIMARY EXAMINER